

IN THE CLAIMS

Claim 1 (cancelled).

Claim 2 (currently amended): A device for imaging printing plates comprising:

an array of n laser diodes which image n image points, so that one laser diode of the array is allocated to each i -th point, with i being from $\{1, \dots, n\}$, the n image points being separated by a spatial interval l between adjacent image points, with a pitch distance p of dots to be imaged by the array,

the laser diodes being individually-drivable single stripe laser diodes, wherein the spatial interval l between adjacent image points, measured in units of the pitch distance p of the dots, is an integral multiple m of the pitch distance p between the dots; and

wherein the integral multiple m and the number n of image points have no common divisor; and

at least one detector for testing for correct functioning and determining a power output of one or of a plurality of the laser diodes.

Claim 3 (cancelled).

Claim 4 (previously presented): The device as recited in claim 2 wherein the spatial interval l of adjacent image points, measured in units of the pitch distance p of the dots, is smaller than the number n of the image points.

Claim 5 (previously presented): The device as recited in claim 2 wherein the multiple m and the number n of the image points are prime numbers.

Claim 6 (previously presented): The device as recited in claim 2 further comprising imaging optics for correcting at least one of divergence and aberration.

Claim 7 (previously presented): The device as recited in claim 2 further comprising a control unit, at least one of the laser diodes of the array being controlled by the control unit.

Claim 8 (previously presented): The device as recited in claim 2 wherein the number of laser diodes in the array is between 10 and 100.

Claim 9 (previously presented): A device for imaging printing plates comprising:

an array of n laser diodes which image n image points, so that one laser diode of the array is allocated to each i -th point, with i being from $\{1, \dots, n\}$, the n image points being separated by a spatial interval l between adjacent image points, with a pitch distance p of dots to be imaged by the array,

the laser diodes being individually-drivable single stripe laser diodes,

wherein the laser diodes are spaced apart on the array by a distance of between 100 and 1000 micrometers, and a width of emitter surfaces of the laser diodes is less than 10 micrometers.

Claim 10 (original): The device as recited in claim 9 wherein the width is 5 micrometers.

Claim 11 (cancelled).

Claim 12 (previously presented): The device as recited in claim 2 further comprising a detector for determining a power output of at least one of the plurality of laser diodes and a laser controller, the laser controller being controlled as a function of the power output determined by the detector.

Claim 13 (previously presented): The device as recited in claim 2 wherein at least one laser diode is a pulse controlled laser.

Claim 14 (previously presented): The device as recited in claim 2 wherein a repetition rate of the light pulses is at least exactly as great as a pulse frequency of the pulse-controlled laser in order to displace the individual dots.

Claim 15 (previously presented): The device as recited in claim 2 further comprising imaging optics including at least one reflective optical element.

Claim 16 (previously presented): The device as recited in claim 2 further including imaging optics having micro-optical components.

Claim 17 (cancelled).

Claim 18 (currently amended): An interleaving raster scan line method for imaging printing plates by generating raster points using an array of n laser light sources, which use an imaging optics to image n image points arranged on a line, the n image points being separated by a spatial interval of adjacent points l , comprising the steps of:

simultaneously generating n image points on a printing plate by a plurality of laser light sources;

generating a relative motion between the image points and printing plate;

displacing the image points with a translation component perpendicular to ~~{an axis defined by}~~ the line of the image points by a first specific amount;

displacing the n image points in a direction defined by the line of the n image points by a second specific amount;

repeating the displacement steps, an amount of the second specific displacement being greater than the spatial interval l of adjacent image points.

Claim 19 (original): The interleaving raster scan line method as recited in claim 18 wherein the second specific amount, measured in units of the pitch distance p of dots to be imaged, is equal to the number n of image points.

Claim 20 (original): The interleaving raster scan line method as recited in claim 19 wherein the spatial interval l of the image points is an integral multiple of the pitch distance p of dots of the laser diodes.

Claim 21 (previously presented): The interleaving raster scan line method as recited in claim 18 wherein the spatial interval l of the image points, measured in units of a pitch distance p of dots of the laser diodes, and the number of laser diodes n have no common divisor.

Claim 22 (original): The interleaving raster scan line method as recited in claim 21 wherein the spatial interval l of the image points, measured in units of the pitch distance p of the dots, and the number of laser diodes are prime numbers.

Claim 23 (currently amended): A print unit comprising at least one device for imaging printing plates, the device including an array of n laser diodes which image n image points, so that one laser diode of the array is allocated to each i -th point, with i being from $\{1, \dots, n\}$, the n image points being separated by a spatial interval l between adjacent image points, with a pitch distance p of dots to be imaged by the array, the laser diodes being individually-drivable single stripe laser diodes; the spatial interval l between adjacent image points, measured in units of the pitch distance p of the dots, being an integral multiple m of the pitch distance p between the dots; wherein the integral multiple m and the number n of image points have no common divisor; and at least one detector for testing for correct functioning and determining a power output of one or of a plurality of the laser diodes.

Claim 24 (original): A printing press comprising at least one print unit in accordance with claim 23.

Claim 25 (previously presented): A print unit comprising at least one device for imaging printing plates, the device including an array of n laser diodes which image n image points, so that one laser diode of the array is allocated to each i -th point, with i being from $\{1, \dots, n\}$, the n image points being separated by a spatial interval l between adjacent image points, with a pitch distance p of dots to be imaged by the array, the laser diodes being individually-drivable single stripe laser diodes, the laser diodes being spaced apart on the array by a distance of between 100 and 1000 micrometers, and a width of emitter surfaces of the laser diodes being less than 10 micrometers.

Claim 26 (previously presented): A printing press comprising at least one print unit in accordance with claim 25.

Claim 27 (previously added): The device as recited in claim 2 wherein the device is in a computer-to-plate unit and the printing plate is an offset printing plate.

Claim 28 (previously added): The device as recited in claim 2 wherein the device further comprises a cylinder, the printing plate being situated on the cylinder.

Claim 29 (previously added): The device as recited in claim 2 wherein the array of laser diodes is movable with respect to the printing plate.